

Space/Flight Operable Miniature Six Axis Transducer, Phase I

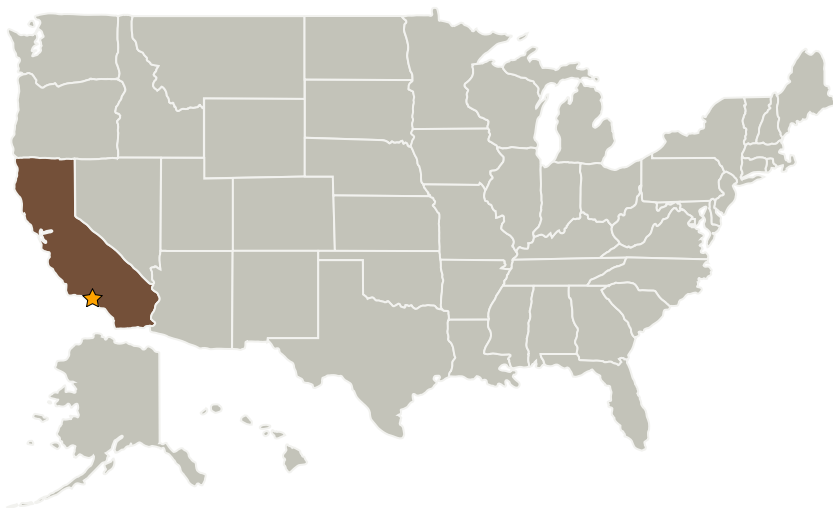
Completed Technology Project (2009 - 2009)



Project Introduction

New & innovative technologies are needed to support exploration of remote & presently inaccessible terrain features on Mars & enable surface & subsurface material sampling. Key among those new technologies is the ability to measure & control force & torque loads on robotic arms, tether play-out & directional systems & subsurface boring systems. Presently available multi-axis sensors do not support all of these mission requirements, particularly with respect to small size, low mass & low-temperature survivability & operation. This innovative development will produce a force/moment feedback sensor that can reliably operate in spaceflight/Mars environments that would fully support this planetary mission. FUTEK Advanced Sensor Technology, Inc. has the Mars hardware development experience & industry know-how to design & develop the required compact, low mass, 6-axis multi-component cryogenic transducer.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California
Futek Advanced Sensor Technology, Inc.	Supporting Organization	Industry	Irvine, California



Space/Flight Operable Miniature Six Axis Transducer, Phase I

Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Space/Flight Operable Miniature Six Axis Transducer, Phase I

Completed Technology Project (2009 - 2009)



Primary U.S. Work Locations

California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX07 Exploration Destination Systems
 - └ TX07.1 In-Situ Resource Utilization
 - └ TX07.1.1 Destination Reconnaissance and Resource Assessment